From: Selim <Selim@sawayaeng.com>
Sent time: 06/18/2019 08:02:35 AM
To: Ron Dragoo
Cc: So Kim; Jill Martin <jmartin@trumpnational.com>; Ara Mihranian; Scott Campbell <scampbell@trumpnational.com>
Subject: 2019-06-18 # Tract 50666 # Request for Storm Drain Amendment
Attachments: 2019-06-17 SD Request2City.pdf

Mr. Dragoo,

On behalf of the Trump Organization, I am hereby submitting a request to amend the approval of the ultimate storm drain system of MTD 1472-5, tract 50666 as shown on the attached letter.

Kindly, let me know if you would need further information

Thank you
Selim Sawaya P.E. / P.L.S.
(626) 715-2320

2019-06-17 SD Request2City.pdf

SAWAYA ENGINEERING CONSULTANTS, INC.
CIVIL ENGINEERING • LAND PLANNING • SURVEYING

June 17, 2019

City of Rancho Palos Verdes.
30940 Hawthorne Blvd.
Rancho Palos Verdes, CA 90275
Department of Public Works

Re: **Request to use Forestall Canyon to convey off-site storm water in lieu of the proposed 60 inch Reinforced Concrete Pipe.**

Mr. Dragoo;

On behalf of VH Property, Sawaya Engineering Consultants has prepared this letter to propose to continue using Forestall Canyon as a storm drain delivery system in lieu of constructing the approved storm drain pipe as shown on the 2005 Amended Grading Plan of Phase II, as described below.

Historically / Predevelopment:

Three different storm drain systems were constructed to outlet to Forestall Canyon to ultimately convey the off-site flow to the ocean. Historically, the flow in Forestall Canyon ranged from 613.0 cfs at Point "D" to 1050.0 cfs. At Point "B" (see Exhibit A).

Approved Ultimate Drainage Concept:

The Drainage Concept of the development as proposed in 2000 and shown on Exhibit "B" was set to reduce / minimize the risk of flooding of the proposed lots from Forestall Canyon. As a result, the flow within Forestall canyon was reduced from 1050.0 cfs at Point "B" to approximately 254.0 cfs. The balance of approximately 800 cfs was to be conveyed back to Forestall Canyon downstream of the proposed lots at Point "B" via a storm drain piping system.

Existing / As-built Storm Drain System

The storm drain systems per PD 86 and PD 269 were existent prior to the development. Line "L" and Line "M" were constructed in 2004 and have been in operation since. The only remaining storm drain lines to be constructed for the development to satisfy the approved Drainage Concept are Line "N" and line "P" (See Exhibit "B").

In the interim and until the ultimate drainage system is completed, a temporary pipe was constructed in 2005 to convey the flow of PD 86 and PD 269 back to Forestall Canyon (See Exhibit "C"). Since 2005, (approximately 15 years), the flow within Forestall Canyon between Point "D" and Point "B" has ranged from 633.0 cfs to 754.0 cfs, which is below the historical / predevelopment flow of 1050.0 cfs.

Proposed Drainage Alternative

In 2005, an amended loting configuration for the site was approved and graded to provide for a driving range in lieu of 16 residential lots, thus reducing the number of residential lots west of Forestall Canyon from 29 to only 13 lots. The amended site as approved and graded has reduced and likely eliminated the risk of residential flooding from Forestall Canyon rendering the proposed Line "N" (60" RCP) redundant and unnecessary. Therefore, VH Property is requesting the City of Rancho Palos Verdes' approval to eliminate the portion of Line "N" that is adjacent to Forestall Canyon from Point "B" to Point "D".

2019-06-17 SD Request2City.pdf

Kindly, consider the points below when evaluating the proposed alternative:

1. The proposed ultimate flow of Forestall Canyon would be approximately 72% of historical (Predevelopment at Point "B" is 1050 cfs – Post development at Point "B" is 754 cfs).
2. The proposed ultimate flow of Forestall Canyon would be equal to the current/interim flow.
3. Forestall Canyon has performed well under the current/interim condition for the past 15 years.
4. No Residential lots would be at risk from flooding and high velocity scouring action.
5. Forestall Canyon has the capacity to carry the anticipated flow with a velocity less than 15 fps. (See Exhibit "E" for Hydraulic Calculation).
6. Since PD 86 and PD 269 are debris carrying line, Forestall Canyon is more suitable to carry the flow rather than a storm drain pipe.

Additional considerations:

7. The construction of Line "N" is very intrusive to the area due to its size (60") and depth (20').
8. Line "N" if constructed would be a debris carrying line with a pipe diameter of 60 inch at a minimum slope of 5%, carrying a flow of 549 cfs, resulting in a velocity of at least 38 fps. This would require a large outlet structure / riprap pad configuration which would be intrusive to the ecosystem of Forestall Canyon.
9. The Operator of the Golf Course is bound by a maintenance agreement with the City of Ranch Palos Verdes, which covers the extent of maintenance liability over Forestall Canyon and all outlet structures.

Your consideration of the above matter is greatly appreciated.

Sincerely,

Sawaya Engineering Consultants INC.
Selim R Sawaya PE, PLS

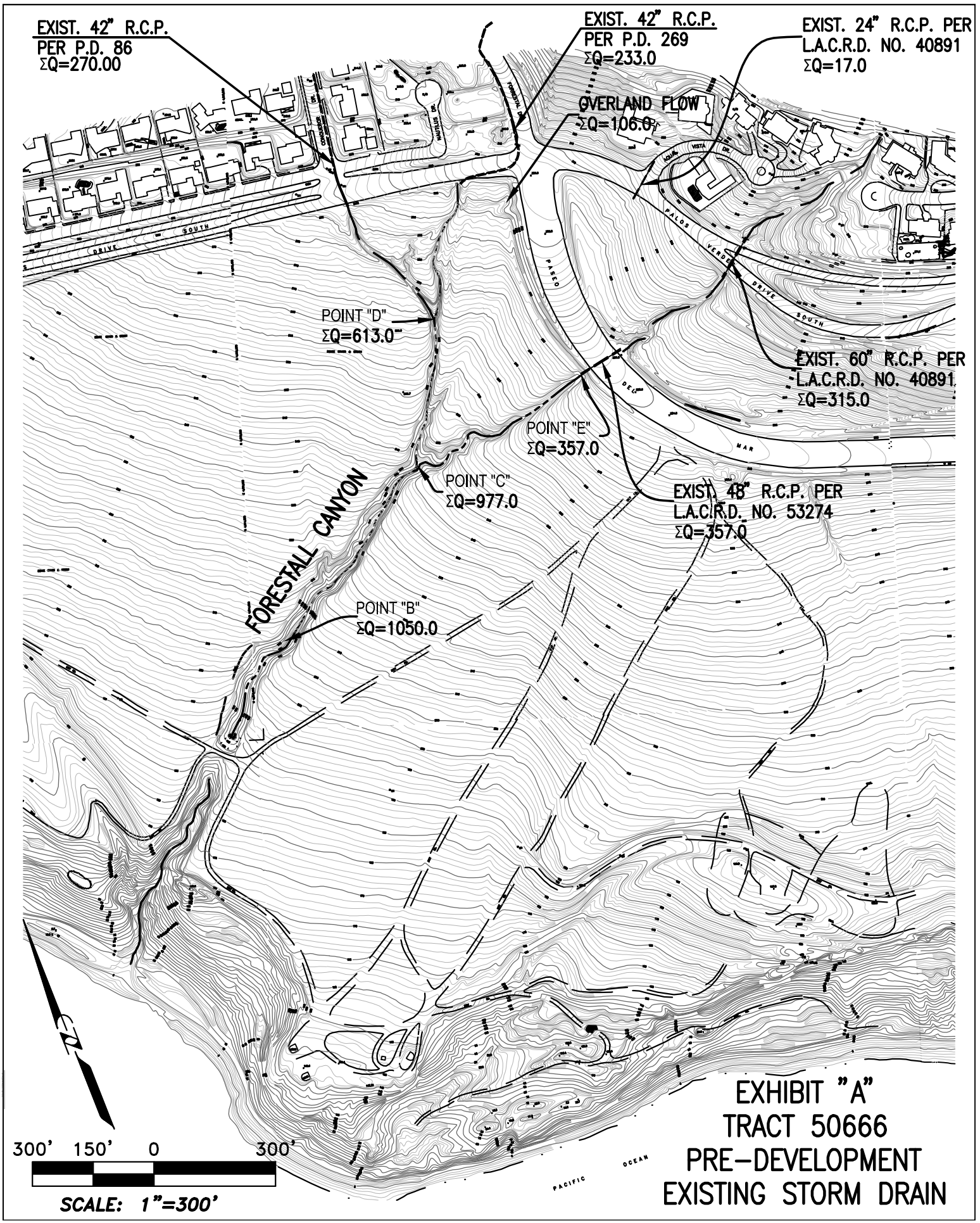
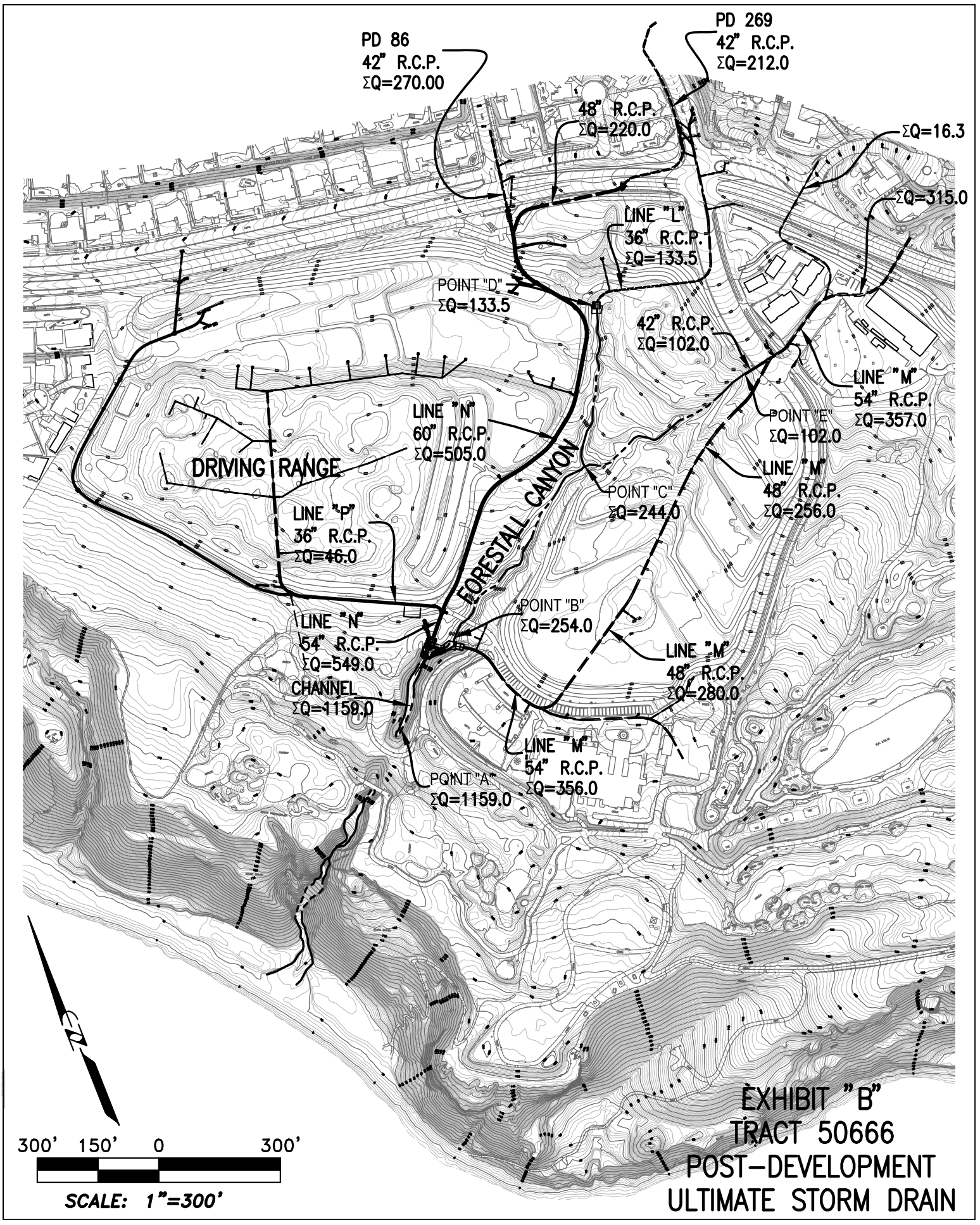
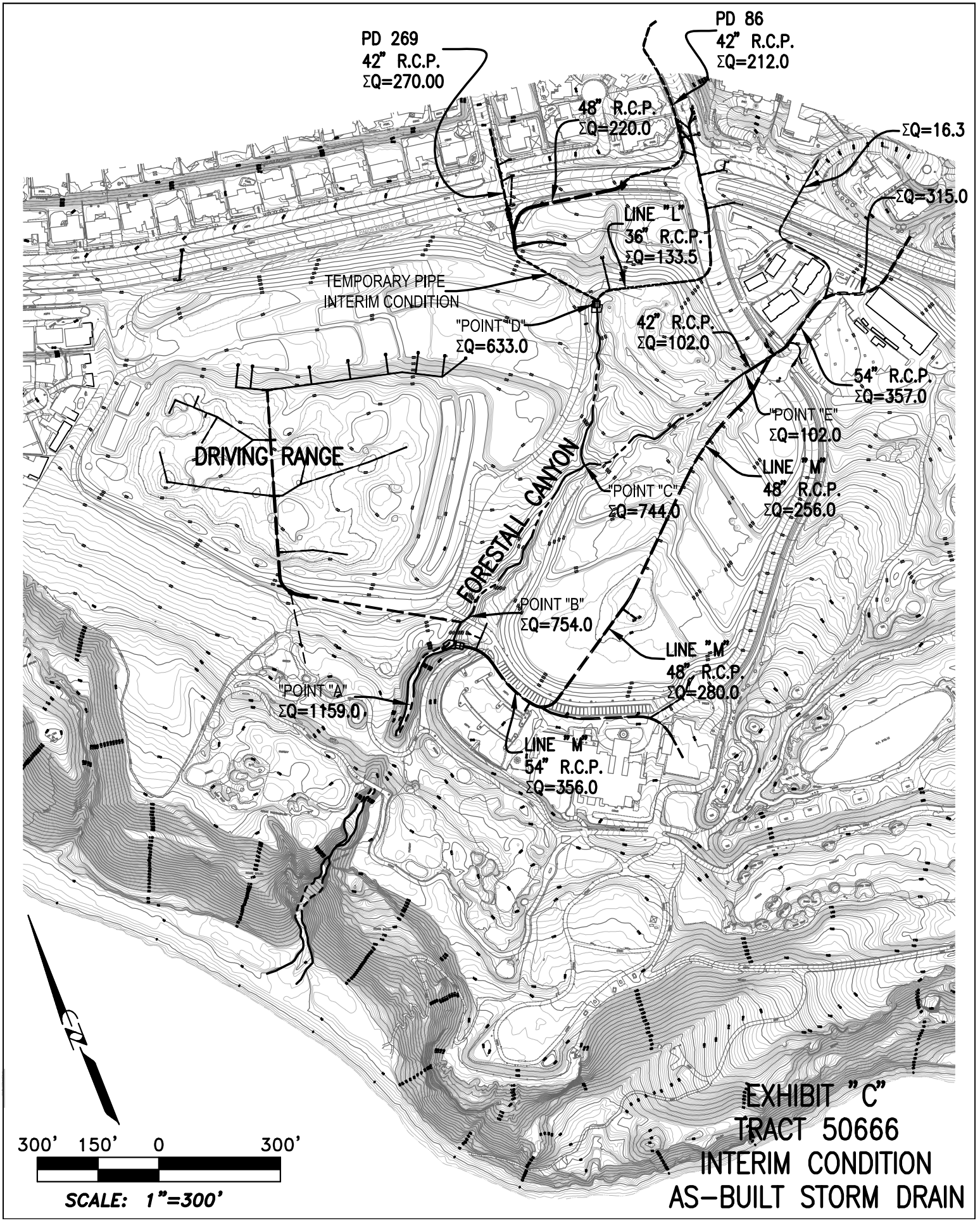
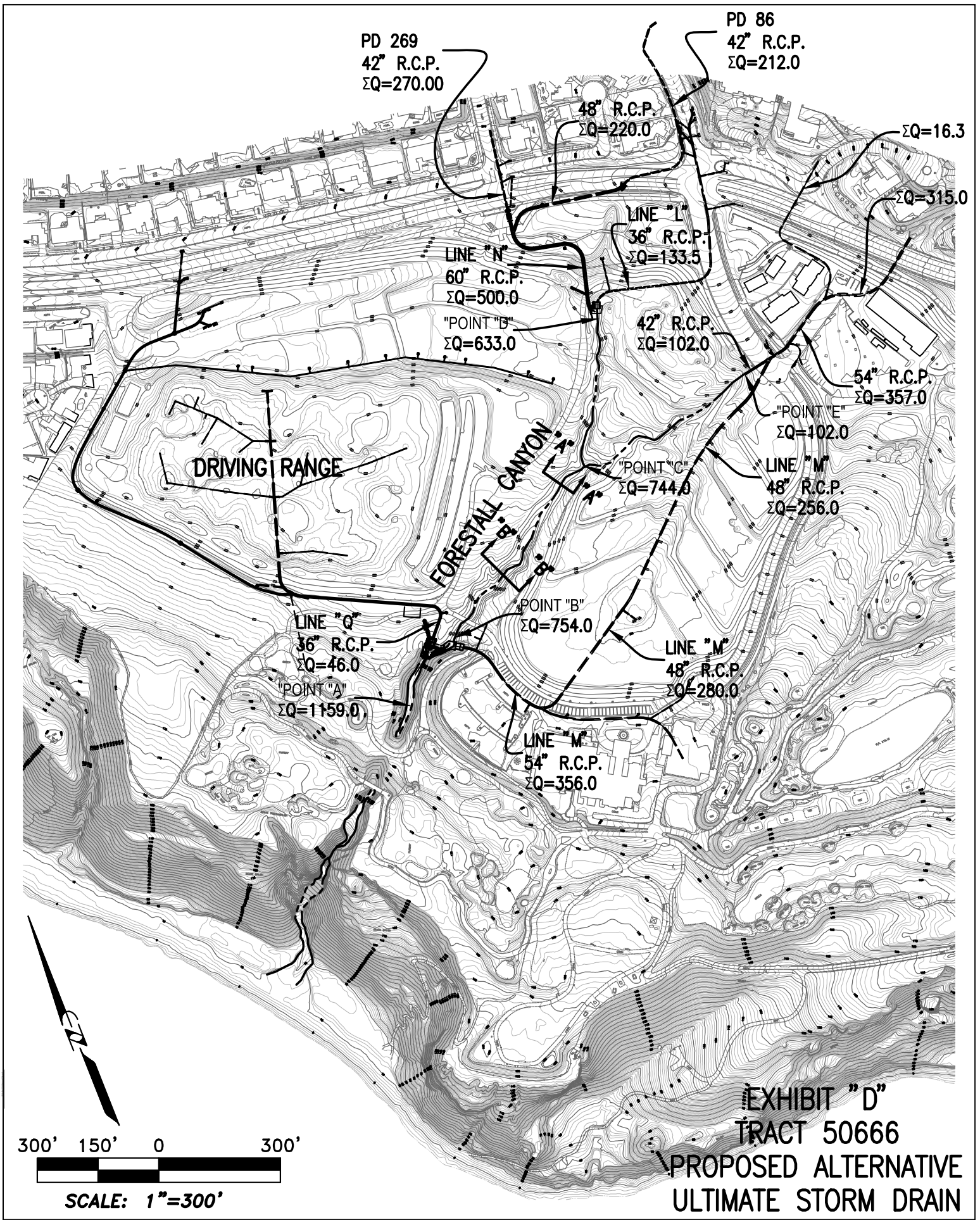
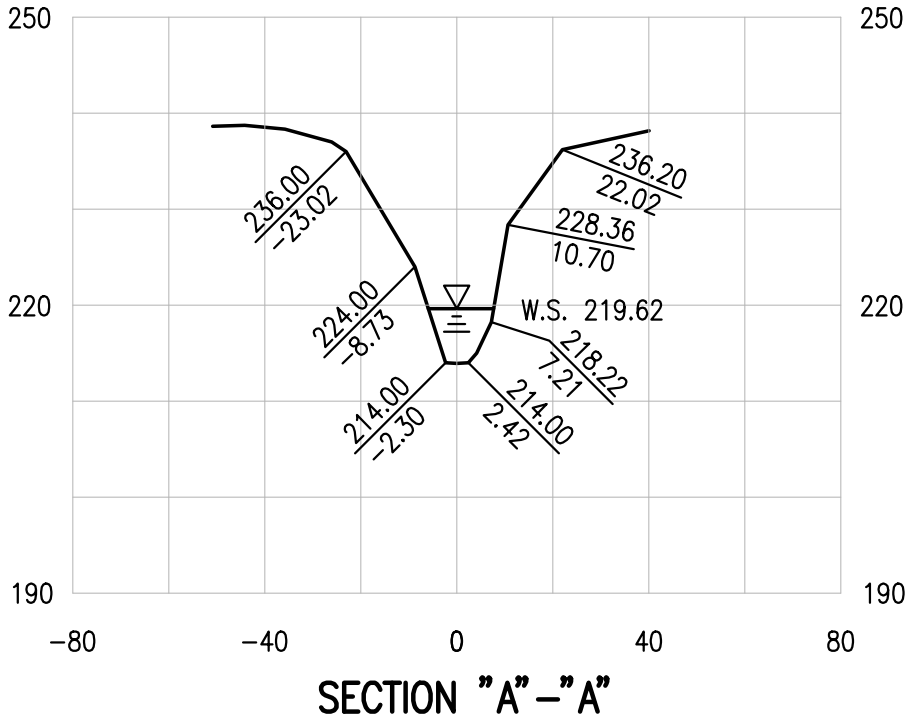


EXHIBIT "A"
TRACT 50666
PRE-DEVELOPMENT
EXISTING STORM DRAIN


PD 86
42" R.C.P.
ΣQ=270.00
PD 269
42" R.C.P.
ΣQ=212.0
48" R.C.P.
ΣQ=220.0
ΣQ=16.3
ΣQ=315.0
LINE "L"
36" R.C.P.
ΣQ=133.5
POINT "D"
ΣQ=133.5
42" R.C.P.
ΣQ=102.0
LINE "M"
54" R.C.P.
ΣQ=357.0
POINT "E"
ΣQ=102.0
LINE "N"
60" R.C.P.
ΣQ=505.0
DRIVING RANGE
FORESTALL CANYON
POINT "C"
ΣQ=244.0
LINE "M"
48" R.C.P.
ΣQ=256.0
LINE "P"
36" R.C.P.
ΣQ=46.0
POINT "B"
ΣQ=254.0
LINE "N"
54" R.C.P.
ΣQ=549.0
CHANNEL
ΣQ=1159.0
LINE "M"
48" R.C.P.
ΣQ=280.0
LINE "M"
54" R.C.P.
ΣQ=356.0
POINT "A"
ΣQ=1159.0
EQ
300' 150' 0 300'
SCALE: 1"=300'
EXHIBIT "B"
TRACT 50666
POST-DEVELOPMENT
ULTIMATE STORM DRAIN


PD 269
42" R.C.P.
ΣQ=270.00
PD 86
42" R.C.P.
ΣQ=212.0
48" R.C.P.
ΣQ=220.0
ΣQ=16.3
ΣQ=315.0
LINE "L"
36" R.C.P.
ΣQ=133.5
TEMPORARY PIPE
INTERIM CONDITION
"POINT "D"
ΣQ=633.0
42" R.C.P.
ΣQ=102.0
54" R.C.P.
ΣQ=357.0
"POINT "E"
ΣQ=102.0
DRIVING RANGE
FORESTALL CANYON
"POINT "C"
ΣQ=744.0
LINE "M"
48" R.C.P.
ΣQ=256.0
"POINT "B"
ΣQ=754.0
LINE "M"
48" R.C.P.
ΣQ=280.0
"POINT "A"
ΣQ=1159.0
LINE "M"
54" R.C.P.
ΣQ=356.0
300' 150' 0 300'
SCALE: 1"=300'
EXHIBIT "C"
TRACT 50666
INTERIM CONDITION
AS-BUILT STORM DRAIN


PD 269
42" R.C.P.
ΣQ=270.00
PD 86
42" R.C.P.
ΣQ=212.0
48" R.C.P.
ΣQ=220.0
ΣQ=16.3
ΣQ=315.0
LINE "L"
36" R.C.P.
ΣQ=133.5
LINE "N"
60" R.C.P.
ΣQ=500.0
"POINT "B"
ΣQ=633.0
42" R.C.P.
ΣQ=102.0
54" R.C.P.
ΣQ=357.0
"POINT "E"
ΣQ=102.0
DRIVING RANGE
FORESTALL CANYON
"POINT "C"
ΣQ=744.0
LINE "M"
48" R.C.P.
ΣQ=256.0
POINT "B"
ΣQ=754.0
LINE "Q"
36" R.C.P.
ΣQ=46.0
"POINT "A"
ΣQ=1159.0
LINE "M"
48" R.C.P.
ΣQ=280.0
LINE "M"
54" R.C.P.
ΣQ=356.0
300' 150' 0 300'
SCALE: 1"=300'
EXHIBIT "D"
TRACT 50666
PROPOSED ALTERNATIVE
ULTIMATE STORM DRAIN

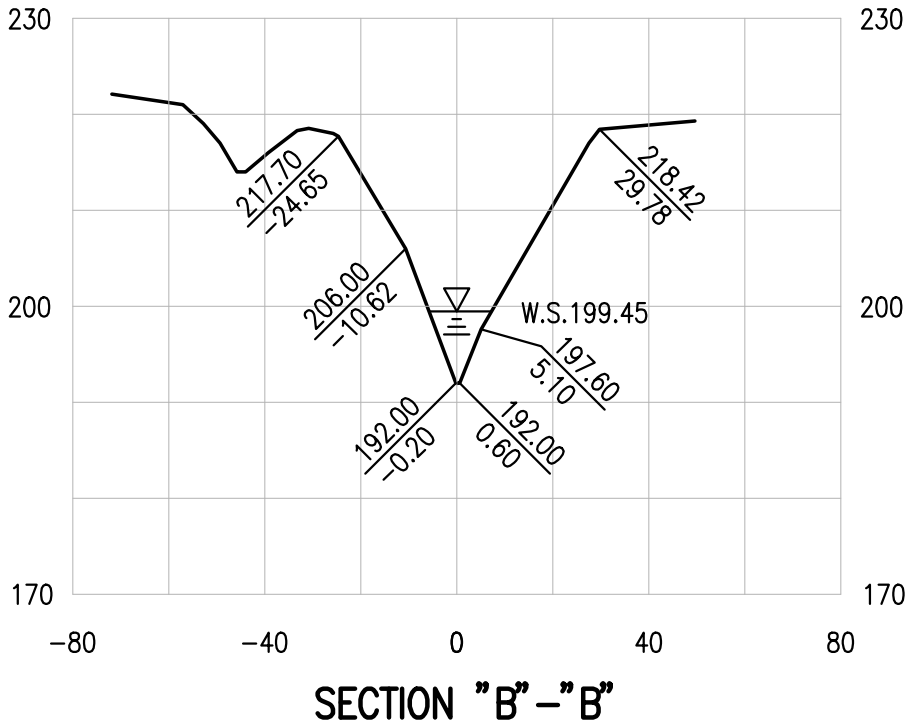


SECTION "A"–"A"

INPUT DATA
Channel Slope 0.043500 ft/ft
Elevation range: 214.00 ft to 236.20 ft.
Discharge 735.00 cfs

Start Station	End Station	Roughness
−23.02	22.02	0.045

RESULTS
Wtd. Mannings Coefficient 0.045
Water Surface Elevation 219.62 ft
Flow Area 53.81 ft²
Wetted Perimeter 19.26 ft
Top Width 13.60 ft
Height 5.62 ft
Critical Depth 220.21 ft
Critical Slope 0.029653 ft/ft
Velocity 13.66 ft/s
Velocity Head 2.90 ft
Specific Energy 222.52 ft
Froude Number 1.21
Flow is supercritical.



SECTION "B"–"B"

INPUT DATA
Channel Slope 0.064000 ft/ft
Elevation range: 192.00 ft to 218.42 ft.
Discharge 754.00 cfs

Start Station	End Station	Roughness
−24.65	29.78	0.045

RESULTS
Mannings Coefficient 0.045
Water Surface Elevation 199.45 ft
Flow Area 49.53 ft²
Wetted Perimeter 20.13 ft
Top Width 13.03 ft
Height 7.45 ft
Critical Depth 200.50 ft
Critical Slope 0.032121 ft/ft
Velocity 15.22 ft/s
Velocity Head 3.60 ft
Specific Energy 203.05 ft
Froude Number 1.38
Flow is supercritical.

SCALE
HORIZ: 1" = 40'
VERT: 1" = 20'

EXHIBIT "E"
TRACT 50666
PROPOSED ALTERNATIVE
HYDRAULIC CALCULATION